

What is claimed is:

1. A catalyst comprises an oxide containing titanium, vanadium, phosphorus and oxygen.

2. The catalyst according to Claim 1, the catalyst  
5 further comprises zirconium.

3. The catalyst according to Claim 1 wherein when an X-ray diffraction spectrum is measured, the spectrum includes a peak of a titanium oxide and is free from peaks of a vanadium oxide and a phosphorus oxide.

10 4. The catalyst according to Claim 2 wherein when an X-ray diffraction spectrum is measured, the spectrum includes a peak of a titanium oxide and is free from peaks of a vanadium oxide, a phosphorus oxide and a zirconium oxide.

5. The catalyst according to any of Claims 1 to 4,  
15 wherein the catalyst is in the form of fiber or sheet.

6. A method of producing a catalyst, comprises the steps of:

(i) spinning a spinning liquid comprising an organic solvent, vanadium, phosphorus and a polymer of a titanium  
20 compound, to obtain a precursor,

(ii) calcining the precursor.

7. The method according to Claim 6, wherein the spinning liquid further comprises zirconium.

8. A method of treating an exhaust gas, comprises a step  
25 of contacting an exhaust gas with a catalyst according to any

of Claims 1 to 5.

9. The method according to Claim 8, wherein the exhaust gas comprises a nitrogen oxide or an organic halide.

10. The method according to Claim 9, wherein the exhaust  
5 gas additionally comprises sulfur oxide.